TESTIMONY HB 4996 JUNE 28, 2005

Good morning Chairman Gaffney and House Health Policy Members. I am Bonnie Nothoff, RDH, Director of Governmental Affairs for the Michigan Dental Hygienists' Association and a hygienist since 1984. It is a great pleasure to come before you to open an avenue of care to the citizens of the state of Michigan. Our delight is in once again working together in our profession to obtain the best results for the Public. HB 4996 is in concert with the Michigan Dental Association and the Department of Community Health. Michigan is unique in its' ability to come to consensus within the dental profession. We don't get to this point easily; we work hard at maintaining appropriate professionalism while being sensitive in negotiations. Our colleagues in the MDA work hard at representing their profession, as we at MDHA do --all the while reaching out to find common ground that doesn't hurt anyone within our respective groups but rather makes all of us winners. HB 4996 defines just how good the state of Michigan can be when it comes to taking care of its' citizens.

In 1991, HB 4699 was introduced by the MDHA and it culminated in PA 58, 1991 which allowed the registered dental hygienist to serve certain populations without assignment. This was a great start but during the last 14-15 years only a handful of programs have been initiated. Many, many times hygienists have explored how they might utilize PA 58, 1991 and as many times learned there were barriers that precluded them from doing so. The purpose of this legislation is to make what is a good idea even better and barrier free. We believe, working together with Representative Vander Veen, the Department and the Michigan Dental Association, the Michigan Dental Hygienists' Association is able to come to you with a product that will result in more nursing homes receiving access to care, more schools receiving access to care and a method by which we can identify other groups as under served, and serve them as well. Along with targeting nursing homes, schools and other under served groups, the bill allows the program to be contracted with a dentist or a hygienist and provides accountability to the Department of Community Health. All this is done retaining the same level of supervision as PA 58, 1991 by the dentist. We believe this product is a win-win-win-win. The Public wins because more programs will be initiated to serve those in need. The MDHA wins because more highly trained professionals will utilize their skills even in areas otherwise not served. It is a win for the state of Michigan who can boast we are truly caring for our citizens and it is a win for the MDA because their collaboration shows their willingness to work within the profession for the greater good of all.

I have provided some statistical information on the relationship between professional oral health care and the incidence of pneumonia in nursing homes. In schools, we know if we reach children early, caries rates decline and cost is lowered. Within each under served group we can demonstrate how they will benefit with professional oral care and how much less expensive it is in the long run.

We at the MDHA are grateful to the legislature for their strong co-sponsorship of HB 4996 and are ready to demonstrate just how well we can bring about access in dental health care as a result of your passage of this from committee to the full House. Your valuable time is appreciated.

Sincerely,
Bonnie Nothoff, RDH. Director Governmental Affairs,
Michigan Dental Hygienists Association

Frank A. Scannapieco

An association between oral conditions such as periodontal disease and several respiratory conditions has been noted. For example, recent evidence has suggested a central role for the oral cavity in the process of respiratory infection. Oral periodontopathic bacteria can be aspirated into the lung to cause aspiration pneumonia. The teeth may also serve as a reservoir for respiratory pathogen colonization and subsequent nosocomial pneumonia. Typical respiratory pathogens have been shown to colonize the dental plaque of hospitalized intensive care and nursing home patients. Once established in the mouth, these pathogens may be aspirated into the lung to cause infection. Other epidemiologic studies have noted a relationship between poor oral hygiene or periodontal bone loss and chronic obstructive pulmonary disease. Several mechanisms are proposed to explain the potential role of oral bacteria in the pathogenesis of respiratory infection: 1. aspiration of oral pathogens (such as Porphyromonas gingivalis, Actinobacillus actinomycetemcomitans, *etc.) into the lung to cause infection; 2. periodontal disease-associated enzymes in saliva may modify mucosal surfaces to promote adhesion and colonization by respiratory pathogens, which are then aspirated into the lung; 3. periodontal disease-associated enzymes may destroy salivary pellicles on pathogenic bacteria to hinder their clearance from the mucosal surface; and 4. cytokines originating from periodontal tissues may alter respiratory epithelium to promote infection by respiratory pathogens.* J Periodontol 1999;70:793-802.

Enzymes/adverse effects; periodontal diseases/microbiology; periodontal diseases/pathogenicity; respiratory tract infections/pathogenicity; oral hygiene; saliva/physiology; cytokines; saliva/enzymology.

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Recently, there has been a resurgence of interest in the interaction between oral conditions and a number of prevalent systemic diseases.[1,2] Among these interactions is that between oral infections such as periodontitis and respiratory disease. Respiratory diseases are responsible for significant morbidity and mortality in human populations. These diseases are widely prevalent and exact an extensive toll on human health and the cost of health care. Indeed, a recent report ranked lower respiratory infections as the third most common cause of mortality worldwide in 1990 (causing 4.3 million deaths), and chronic obstructive pulmonary disease (COPD) as the sixth leading cause of mortality (2.2 million deaths).[3] COPD was the fourth leading cause of death in the United States in 1996[4] claiming 100,000 lives, while pneumonia and influenza together caused almost 84,000 deaths.

This paper will first briefly describe the major respiratory diseases caused or influenced by bacteria. Secondly, the epidemiologic evidence that supports a role for oral bacteria in the process of respiratory infection will be reviewed. Finally, several mechanisms will be proposed to attempt to explain the potential role of oral bacteria in the process of respiratory infection.

Bacterial Pneumonia

This infection can be divided into community acquired- or hospital acquired (nosocomial) types depending upon the etiologic agent responsible.[5] Community-acquired pneumonia is typically caused by pathogens that normally reside on the oropharyngeal mucosa, such as *Streptococcus pneumonia, Haemophilus influenzae, Mycoplasma pneumoniae, Chlamydia pneumoniae, Legionella pneumophila, Candida albicans*, and anaerobic species. In contrast, hospital-acquired, or nosocomial, pneumonia is often caused by bacteria that are not normally residents of the oropharynx but that enter this milieu from the environment, including Gram-negative bacilli (enterics such as *Escherichia coli, Klebsiella pneumoniae, Serratia* sps., *Enterobacter* sps.), *Pseudomonas aeruginosa*, and *Staphylococcus aureus*.

Respiratory infections are of particular concern in hospitals and other health care facilities such as nursing homes, especially in intubated patients. More than 5% of all hospital inpatients develop an infection, with 10 to 20% of these pneumonia. These infections often prolong hospital stays, increase patient care costs,